**The Mad Minute Exercise**

**What is it?**

A Mad Minute exercise allows students to work quickly to practice and refine procedural skills. The exercises focus on the mental tasks of recall and replicating a procedure. The exercises are written so as to become slightly more complex within the minute so as provide the student opportunity of deepening his/her procedural competence. Each Mad Minute exercise focuses on one specific concept or procedure so that the student can practice the procedure at least 10 times in a minute. The tasks would be intentionally followed up in class by purposeful extension to call out the concepts and mathematical generalizations.

**﻿How touse a Mad Minute to Support Student Success?**

Each Mad Minute exercise will support one or more of the stated Through Line Concepts that were identified in the first year of the RPM at Clark College. The five Through Line concepts are:

1) proportional reasoning;

2) number sense;

3) quantitative relationships;

4) interpreting symbolic meaning; and

5) equivalence.

The exercise allows quick practice as well we an opportunity of formative assessment of each student's procedural skill. It provides feedback for the student about their procedural competency. The tasks also facilitate class discussion about what habits of mind allow a student to work quickly through a procedure. We hope to support the idea that procedural competency is not achieved simply by practice but by purposeful practice.

**﻿**

**How do I write a Mad Minute Exercise?**

There is a protocol for the exercises. Notice that the basic structure for the exercise is to:

1) Work Quickly;

2) Pause and Reflect;

3) Extend Knowledge; and

4) Reflect on understanding.

**Review the protocol on the opposite side of the page.**

**Protocol for creating a mad minute activity.**

**Use the following outline to write a mad minute activity. These will be useful in making the activity easy to share with your colleagues.**

**PRIMARY CONCEPT** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***PURPOSE:*** Here you will write a sentence or two describing the outcome(s) this activity is intended to produce. Identify any of the 5 Through Lines that connects with this activity. State when this learning task is appropriate in the math curriculum. (See examples)

***Supplies:*** Identify all supplies (if any) needed for this exercise.

***Directions:***

Write specific instructions to the teacher, if needed

* Describe the room set-up
* Identify if students will be working alone, pairs, groups
* Inform teachers that problems on Mad Minute worksheet get progressively harder and problems connect with current and previous content
* Students indeed have only one minute to work the problems
* Teachers do not give lectures during this activity. They function as coaches and facilitators.

List the vocabulary for this activity

Faculty will ensure that the vocabulary listed here comes up in a variety of ways

Write sample prompts the teacher might use in providing directions to students.

Prompts introducing Mad Minute activity

* *You will work alone to solve as many problems on the sheet as possible in one minute.*
* *Skip any problems you cannot do and continue through the worksheet.*

One or more prompts to extend understanding after students complete the Mad Minute worksheet

* *You will work in pairs to solve a “prickly problem” on the Mad Minute worksheet.*
* *A prompt that moves students toward a better number sense.*
* *Rewrite one problem on the worksheet in a graph, table, English words, etc.*
* *A prompt that asks students to interpret symbolic meaning.*
* *A prompt that asks students about quantitative relationships (functions, formulas, graphing)*
* *A prompt related to proportional reasoning and problem solving*
* A prompt related to creating mathematical equivalence

Include the approximate amount of time for each section

Include what the students/faculty will be doing in each section.

Include an individual reflection or class discussion prompt

* Provide sample questions.

***Approximate time:*** Estimate thetotal time for the full exercise.

***Instructor Notes:***

Include alternative formats, points to remember, other applications, insights to student learning, etc.

***Contributing Teacher’s Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***